

**Waste Tire Pile Cleanup Program**

**Clean Sweep (Phase II) Plan**

**Department of Environmental Quality**

**August, 2007**

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## **Clean Sweep (Phase II) Plan**

The Department of Environmental Quality's (DEQ) Waste Tire Program staff has completed the analysis of the statewide resurvey of the 161 tire piles remaining in Virginia. Based on the factors described below, the cost to remediate the estimated 2,425,000 tires in these piles is approximately \$7,925,000. The amount of funding designated for tire pile cleanups that will be available through 2008 (when the fee that supports this effort sunsets) is projected to be \$4,300,000. With this amount of funding, DEQ will be able to cleanup just over one half of the known remaining eligible tires.

The remainder of this document discusses the field work and analysis used to derive these figures and our plans for how to best utilize the remaining funds to clean up the most tires.

### **I. Clean Sweep Phase I**

After the 2003 General Assembly increased the tire recycling fee from \$.50 to \$1 per tire sold at retail (until 2006), DEQ initiated "Clean Sweep", a statewide program to clean up tire piles using 5 regional contractors. Clean Sweep began in late 2003 but was suspended in November 2005 due to concerns about the level of expenditures occurring from the Waste Tire Trust Fund.

Not only was the cleanup of all piles incomplete, DEQ had utilized all additional revenues available from the \$.50 tire fee increase plus almost all of the existing balance in Waste Tire Trust Fund (Fund). In total, over \$10.6 million had been spent on tire pile cleanup work.

Three primary factors were responsible for the high level of expenditures and the suspension of services:

1. The 5 Clean Sweep contractors found that most piles significantly exceeded size estimates, some which dated back to 1993. The average exceedance was 67%, but several were far larger; and the amount of tires in one pile ended up being 1,500% larger than field estimates.
2. Unit costs increased from \$75 per ton in 2003, to \$150 in 2004, and reached \$225 in 2005. The higher costs resulted especially from a significant increase in fuel prices. Also, some of the piles that were cleaned up during this period required more complex site preparation and restoration work. Finally, the accelerated contract performance schedules in early 2005 resulted in more rapid expenditures from the Fund.
3. Newly discovered qualified tire piles ("new finds") were incorporated as the work progressed. Between 2003 and 2005, 133 "new finds" containing over 1,200,000 tires were added to DEQ's Statewide Waste Tire Pile database and incorporated into the contractor work lists. The cost of accommodating "new finds" further disrupted Clean Sweep finances.

DEQ reported this situation to the General Assembly in two successive Annual Reports:

1. The 2006 General Assembly was notified (Report to the General Assembly, 2005, page ii) that \$10.6 million had already been spent and that full cleanup “would cost an estimated (additional) \$6,000,000” for a total of \$16.2 million. The General Assembly responded by extending the \$1 fee through 2008.
2. In its Report to the 2007 General Assembly (Report to the General Assembly, December 2006, page ii), DEQ reported that a statewide resurvey of piles was needed “to determine the number of tires remaining and the total cost to abate all sites.”

NOTE: Based on this resurvey, the prior estimate of \$6,000,000 has been revised to \$7,925,000 (see Section II).

## **II. Addressing the Cost Escalation Factors**

We analyzed each cost factor above to determine the best course of action for using the funds projected to be available through 2008.

### **A. Revised Tire Pile Size Estimates**

To implement DEQ’s recommendation to the 2007 General Assembly, we contracted with a tire pile specialist to develop new DEQ pile estimating techniques. This contractor then conducted 94 tire pile “resurveys” while DEQ staff conducted the other 67. The results of the resurvey are:

<u>DEQ Region</u>	<u># Piles</u>	<u>Estimated # Tires</u>	<u>Estimated Costs</u>
SWRO	12	165,000	\$ 600,000
WCRO	28	215,195	\$ 825,000
SCRO	3	13,730	\$ 50,000
VRO	13	281,150	\$ 825,000
NRO	14	200,900	\$ 700,000
TRO	29	857,326	\$ 2,600,000
PRO	<u>62</u>	<u>692,054</u>	<u>\$ 2,325,000</u>
<u>TOTAL</u>	161	2,424,105	\$ 7,925,000

## **B. Unit/Total Costs**

The estimated total cost of \$7,925,000 to cleanup the remaining 161 eligible tire piles was developed using an average cost of \$200 per ton.

## **C. Newly Discovered Tire Piles (“New Finds”)**

Many of the piles remaining to be cleaned up have been on the Waste Tire Program list since 1993. Simultaneously trying to accommodate any newly discovered tire piles “new finds” may be viewed as unfair to property owners that have been waiting for many years for cleanup. Accordingly, new finds will continue to be surveyed and certified by DEQ Regional Office staff as they are discovered, but that the property owner should be notified that their pile may be cleaned up as a later priority. A new find could be cleaned up sooner if it is determined that the pile is an imminent risk to human health and the environment.

This policy will leave unaddressed, however, any tire piles that would otherwise be eligible for cleanup. For example, in the first six months of 2007, DEQ has discovered, surveyed and certified 16 additional waste tire piles, containing an estimated 260,000 tires at a projected cleanup cost of \$700,000.

Designation of a lower priority status would apply to landowners that are subject to illegal dumping. Generally, those tire piles have also been eligible for cleanup in the past, but adding them now to the certified pile list will mean result in ever-increasing costs. New finds (including any illegal dumps) will now be segregated with a new numbering system in order to make the distinction. In addition, new finds can also be addressed through local and State police enforcement actions, DEQ civil enforcement and by the individual property owners.

## **III. Financial Management Decisions**

While the \$1 fee is still in effect, DEQ has implemented two financial management strategies to help avoid future Waste Tire Trust Fund cash flow difficulties:

**Separate the Waste Tire Trust Fund into two equal accounts.** The Fund was separated into two accounts in April 2006: a Base Program to fund all administrative and End User Reimbursement Program costs, and a Cleanup Projects account to fund only the costs of tire pile cleanup activities. When the fee reverts back to \$.50 on July 1, 2008, the Trust Fund will revert to a single account.

**Issue cleanup contracts only after cash for full payment has been received and encumbered.** Rapid expenditures from the Fund in late 2005 resulted in the suspension of all 5 Clean Sweep contracts because revenue receipts did not match contractor payments. Later payments of these obligations resulted in the delayed payment of twenty (20) End User applications (a 6-week period in April-May, 2005) due to a low cash balance.

These two actions will help to ensure the solvency of the Waste Tire Trust Fund by contracting only after funds are in-hand, and by using only Cleanup Program funds for cleanups.

To implement the financial management decisions above, DEQ has developed a Prospective Cash Flow Planning Work Sheet, which projects revenues and expenses for both the Base Program

and Cleanup Projects through 2009. The Waste Tire Trust Fund is projected to accrue an additional \$4,300,000 for tire pile cleanups prior to when the tire recycling fee sunsets on July 1, 2008.

#### **IV. Phase II Implementation Plan**

Based on the information presented above, we will be implementing the following steps:

**Step 1. Corrective Actions.** Before any new cleanup work begins, Corrective Actions are needed at several sites where work was undertaken during 2003-2005. These include restoration work at several sites, removal of piles assembled in advance of the earlier Clean Sweep, and treating mosquito infestations (in conjunction with the State and local health departments) at piles near residences. Funding for this work, estimated at \$250,000, was encumbered in March 2007 and will not affect the \$4.3 million projected to be available for additional tire pile cleanups.

**Step 2. Regional Clean Sweep Implementation Through December, 2008.** Using the regional cost estimates and spreadsheet forecasting, we determined that a Region by Region approach was more cost effective. We further determined undertaking the 5 Regions with less costly work (Northern-NRO; Valley-VRO; South Central-SCRO; West Central-WCRO and Southwestern-SWRO) would allow DEQ to start the field work sooner and complete work over a much larger geographic area.

If funds become available as projected, the following implementation schedule is planned:

<u>Region</u>	<u>Contract Time Frame</u>
WCRO/SCRO	October 2007
SWRO	January 2008
NRO	April 2008
VRO	July 2008

At this point, funds would become available to remove only half of the tires in one of the two larger cost regions (Tidewater-TRO and Piedmont-PRO). TRO has been selected instead of PRO because \$2.6 million was spent in PRO during Clean Sweep Phase I, whereas only \$925,000 was spent in TRO.

½ of the piles in TRO	December 2008
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Note that the dates above are contract start dates and that procurement must begin at least 2 months prior. In addition, the traditional 12-month Time of Performance may be extended per Paragraph II B. in order to proceed "within the normal operational capacity of the selected contractor".

#### **V. Fund Remaining Cleanups from Base Program Revenues**

In accordance with DEQ's Waste Tire Management Plan, annual expenditures for the Base Program (End User Reimbursement Program, staffing, permitting, compliance and enforcement, and hauler registrations) are approximately \$2.3 million. These services support the tire recycling infrastructure so that new waste tire piles are not created. After funding the Base Program,

approximately \$100,000 to \$200,000 per year (depending on revenue) is projected to be available for cleanups of eligible tire piles.

Once the work in Step 2 above is completed, DEQ proposes to return to addressing eligible tire piles as the Waste Tire Program did prior to the 2003 tire recycling fee increase. This includes using one or more of the following:

- elevated End User Reimbursement payments,
- demonstration projects,
- contracted cleanups on a sub-Regional level, and
- targeted cleanups based on risk (i.e. the Big 5 Plan)

Based on past cleanup history and with the amount of cleanup funding expected to be available after the tire recycling fee reduces back to \$0.50 on June 30, 2008, it may take over 20 years to finish the cleanup of the remaining piles and any “new finds”. Consideration may need to be given to extending the \$1 fee so that the Commonwealth would be able to more promptly address all known waste tire piles and those that continue to be discovered.

## **VII. Implementation Notifications**

This plan will be sent to the DEQ Regional Office Staff to notify them of the implementation sequence in order to provide accurate information to the public on the tire pile cleanup contract process. In addition, DEQ will notify the pile owners of the projected time frames that we intend to begin cleaning up their tire piles.

**Appendix 1. Statewide Waste Tire Pile Database**

ID NUMBER	COMMON NAME	COUNTY	REGION	PILES	
				NUMBER	TIRES REMAINING
001001	Accomack LF.	Accomack	Tidewater	1	14,293
001002	Bowser's Salvage	Accomack	Tidewater	1	45,037
001003	Harman Part B	Accomack	Tidewater	1	20,000
001004	Freddie Garage	Accomack	Tidewater	1	95,434
001008	Accomack LF_North	Accomack	Tidewater	1	22,968
001059	Lunn	Accomack	Tidewater	1	3,333
005080	Bratton's (f Bridge is OK)	Alleghany	West Central	1	15,430
005051	Tucker (Hiser)	Alleghany	West Central	1	4,170
007003	B & N Salvage	Amelia	Piedmont	1	750
009080	Gouldthorpe	Amherst	South Central	1	6,560
015002	Byrd	Augusta	Valley	1	37,550
015058	Shenandoah Auto Salvage	Augusta	Valley	1	34,840
019051	Scott /Snead	Bedford	West Central	1	2,160
023053	Thomas Part B	Botetourt	West Central	1	7,800
023051	Luber/Ballard Part B	Botetourt	West Central	1	750
023052	Horne	Botetourt	West Central	1	20,590
029080	Dalton	Campbell	South Central	1	3,540
033055	Bevins	Caroline	Northern	1	20,000
033055	Harris Part B	Caroline	Northern	1	44,600
035100	Affordable Mufflers/Halsey	Carroll	Southwest	1	2,400
036080	Bragg	Charles City	Piedmont	1	3,500
036001	Thorpe	Charles City	Piedmont	1	581
036004	Hofmeyer	Charles City	Piedmont	1	1,000
036005	Bear Island	Charles City	Piedmont	1	225

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				NUMBER	TIRES REMAINING
036006	Brown Junk Yard	Charles City	Piedmont	1	22,218
036007	Warriner Road	Charles City	Piedmont	1	2,528
036008	Stallings Farm	Charles City	Piedmont	1	2,000
036061	Evans I	Charles City	Piedmont	1	1,646
036062	Wayside Road	Charles City	Piedmont	1	9,330
037080	Royster Auto Salvage	Charlotte	South Central	1	3,630
550006	Triple Decker Auto Parts	Chesapeake	Tidewater	1	11,160
550019	Johnson's Mustangs	Chesapeake	Tidewater	1	57,980
550024	A&B Used Auto Parts	Chesapeake	Tidewater	1	49,950
550054	Rudy's Auto Parts	Chesapeake	Tidewater	1	17,660
550055	Metro Auto Parts	Chesapeake	Tidewater	1	6,320
550066	Al Rudd Auto Parts	Chesapeake	Tidewater	1	44,540
550068	J&S Tire	Chesapeake	Tidewater	1	3,900
550069	Earl's Used Auto	Chesapeake	Tidewater	1	10,000
550070	Roberts Auto Parts (JRs)	Chesapeake	Tidewater	1	17,160
550072	Gundacker	Chesapeake	Tidewater	1	18,000
036063	Route 652	Charles City	Piedmont	1	133
041012	Seaboard	Chesterfield	Piedmont	1	100
041069	Adamson	Chesterfield	Piedmont	1	500
047055	Boldridge Farm II	Culpeper	Northern	1	20,500
053002	Moody	Dinwiddie	Piedmont	1	267
053004	Deckerhoff	Dinwiddie	Piedmont	1	5,083
057004	Marvin Young's Garage	Essex	Piedmont	1	7,337
057006	Winder/HWY 360	Essex	Piedmont	1	8,179
057052	Johnson	Essex	Piedmont	1	5,370
061005	Jackson (Belvoir)	Fauquier	Northern	1	10,360



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063009	Quesenberry Prop.	Floyd	West Central	1	3,200
065051	Beyer	Fluvanna	Valley	1	7,860
067011	Hodges (Lloyd Hughes) Garage	Franklin	West Central	1	4,320
067013	Gilley's Mt. Farm Part B	Franklin	West Central	1	68,890
067053	Underwood	Franklin	West Central	1	5,080
067054	Hermes	Franklin	West Central	1	400
069080	Pyles	Frederick	Valley	1	7,500
069001	Hott Locked/Posted RO to Resurvey	Frederick	Valley	1	10,800
073001	Dickey's Auto Salvage	Gloucester	Piedmont	1	6,500
073050	Mileage Tire #2	Gloucester	Piedmont	1	2,207
075003	Perkinsville	Goochland	Piedmont	1	5,755
075052	Britt	Goochland	Piedmont	1	6,803
079050	Shifflett	Greene	Valley	1	10,810
075080	K. McLean	Goochland	Piedmont	1	2,000
081010	Cain's Auto Srv	Greensville	Piedmont	1	2,000
085005	Al's Auto Parts	Hanover	Piedmont	1	120,000
085009	Auditorium Auto Parts, Inc.	Hanover	Piedmont	1	21,778
085055	Dunn	Hanover	Piedmont	1	1,000
085056	Hackney	Hanover	Piedmont	1	379
085062	Woodberry Farm Part B	Hanover	Piedmont	1	11,556
085067	Pleasant View Rd	Hanover	Piedmont	1	15,321
085068	Layne Part B	Hanover	Piedmont	1	4,000
087007	W E Robbins	Henrico	Piedmont	1	309
087056	Beulah	Henrico	Piedmont	1	1,916
087063	Evans II	Henrico	Piedmont	1	1,480
087065	Oakley's Lane	Henrico	Piedmont	1	132

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				NUMBER	TIRES REMAINING
087066	Curles Neck Part B	Henrico	Piedmont	1	2,000
087069	Hunters Knoll Part B	Henrico	Piedmont	1	2,500
071051	Jeffers	Giles	West Central	1	780
071052	Klotz Road	Giles	West Central	1	1,800
071053	Doug's Auto Repair	Giles	West Central	1	6,010
089052	Davis	Henry	West Central	1	2,000
095003	Moore's Road Part B - Scattered	James City	Tidewater	1	500
097001	SR 633 Part B - Scattered	King & Queen	Piedmont	1	500
097002	Pollard Auto Parts	King & Queen	Piedmont	1	22,449
097005	Ed's Auto Parts	King & Queen	Piedmont	1	3,897
101001	Aylett Tire Inc.	King William	Piedmont	1	5,150
103002	Beane	Lancaster	Piedmont	1	1,930
103006	Dodson's Garage Part B - Scattered	Lancaster	Piedmont	1	111,693
105050	Bill Ward	Lee	Southwest	1	27,860
107001	Hickman	Loudoun	Northern	1	2,130
109003	Walker	Louisa	Northern	1	6,810
109004	Daves' Auto	Louisa	Northern	1	20,000
115002	Muse Dump Part B - Scattered	Mathews	Piedmont	1	1,000
115050	Mathews Salvage	Mathews	Piedmont	1	1,422
119004	Hogge Junk Yard	Middlesex	Piedmont	1	53,050
119006	Taylor	Middlesex	Piedmont	1	944
121003	Elliston Garage	Montgomery	West Central	1	1,070
121005	Eperly Property	Montgomery	West Central	1	2,920
121006	McCoy Garage	Montgomery	West Central	1	2,560
121050	Esarry/Albee Part B	Montgomery	West Central	1	1,530
125051	Brown Junk Yard	Nelson	Valley	1	4,000

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121006	McCoy Garage	Montgomery	West Central	1	2,560
121050	Esarry/Albee Part B	Montgomery	West Central	1	1,530
125051	Brown Junk Yard	Nelson	Valley	1	4,000
127080	Ellis	New Kent	Piedmont	1	20,000
127002	Golden Wheel Salvage	New Kent	Piedmont	1	1,000
127003	Goodall	New Kent	Piedmont	1	420
127007	Philbates Auto Wrecking, Inc.	New Kent	Piedmont	1	22,934
127008	Gardner	New Kent	Piedmont	1	2,400
127064	Pine Fork Road Part B	New Kent	Piedmont	1	1,500
710012	Ingrams	Norfolk	Tidewater	1	334,490
131060	Northampton Co. LF	Northampton	Tidewater	1	8,058
133004	Wildy	Northumberland	Piedmont	1	3,000
133005	Tire Fire Site	Northumberland	Piedmont	1	1,000
125080	Wood's Garage	Page	Valley	1	5,000
740002	Storaway #1060	Portsmouth	Tidewater	1	2,500
740051	Storaway #1096,1103/With 740002	Portsmouth	Tidewater	1	
145002	Morris Part B	Powhatan	Piedmont	1	24,000
145053	Hicks - Powhatan	Powhatan	Piedmont	1	4,445
149007	Robert Williams	Prince George	Piedmont	1	10,000
149054	Heretick Part B	Prince George	Piedmont	1	102,760
153005	Statewide	Prince William	Northern	1	29,960
155005	Dickerson Estate Part B	Pulaski	West Central	1	100
155008	Hudson Property	Pulaski	West Central	1	30,240
155051	Albert	Pulaski	West Central	1	1,250
760007	Hickory Hill LF	Richmond City	Piedmont	1	5,000

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				NUMBER	TIRES REMAINING
159004	SR638 /Pittts	Richmond Co.	Piedmont	1	6,700
770056	Farris	Roanoke City	West Central	1	300
770059	Baker Ave	Roanoke City	West Central	1	215
770061	Breckenridge	Roanoke City	West Central	1	26,660
161053	Jones	Roanoke Co.	West Central	1	450
161054	Greer/Bond	Roanoke Co.	West Central	1	1,010
161055	Preston	Roanoke Co.	West Central	1	3,510
165001	Custer's Wrecking Yard	Rockingham	Valley	1	94,130
165050	Custer's	Rockingham	Valley	1	32,800
165055	Loker	Rockingham	Valley	1	30,400
165056	MacKenzie	Rockingham	Valley	1	2,820
167050	B& B Auto	Russell	Southwest	1	4,050
167051	Paul Vencill	Russell	Southwest	1	4,660
169050	Hilton Trucking	Scott	Southwest	1	14,520
171052	Lear	Shenandoah	Valley	1	2,640
173001	D & J Auto	Smyth	Southwest	1	11,130
173008	Taylor/Lambert Junkyard	Smyth	Southwest	1	11,750
173051	Jack Billings	Smyth	Southwest	1	68,180
175008	All American Auto	Southampton	Tidewater	1	20,768
175010	Davis Garage	Southampton	Tidewater	1	15,936
175011	Chapman Property	Southampton	Tidewater	1	7,355
175012	Courtland USA	Southampton	Tidewater	1	5,059
175051	Brown/Darden	Southampton	Tidewater	1	18,395
177057	Borders (Action)Auto	Spotsylvania	Northern	1	5,840
177004	Redmond (Scott)	Spotsylvania	Northern	1	15,700

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177080	Naylor, Inc	Spotsylvania	Northern	1	20,000
179001	K & M Prop. 2	Stafford	Northern	1	2,600
179005	Heflin	Stafford	Northern	1	1,340
179002	K & M Prop. 1	Stafford	Northern	1	250
175080	Wilson	Southampton	Tidewater	1	780
800010	Gentry Used Parts Part B -Scattered	Suffolk	Tidewater	1	5,000
800018	McKinney's Auto Parts	Suffolk	Tidewater	1	750
183055	Woody's Garage	Sussex	Piedmont	1	6,477
185006	Farmer Prop.	Tazewell	Southwest	1	1,170
185050	H Vencill	Tazewell	Southwest	1	2,220
195080	H C Roberts, Jr Part B	Wise	Southwest	1	15,888
197051	Holston Junkyard	Wythe	Southwest	1	732

